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Y4	5829
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(7 AND Y4).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	12
(L7 AND Y4).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	12

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DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ

<u>L8</u>	L7 and y4	12	<u>L8</u>
<u>L7</u>	weinshank-richard-l.in.	74	<u>L7</u>
<u>L6</u>	branchcheck-theresa.in.	1	<u>L6</u>
<u>L5</u>	walker-mary-w.in.	14	<u>L5</u>
<u>L4</u>	walker-mary-w.in.L3	0	<u>L4</u>
<u>L3</u>	bard-jonathan-a.in.	32	<u>L3</u>
<u>L2</u>	human y4 receptor	28	<u>L2</u>
<u>L1</u>	y4 receptor	60	<u>L1</u>

\$  
FILE 'MEDLINE'  
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FILE 'BIOSIS'  
FILE 'SCISEARCH'  
FILE 'WPIDS'  
FILE 'CAPLUS'  
FILE 'EMBASE'  
=> s y4 receptor#  
L1 406 Y4 RECEPTOR#

=> s human y4 receptor#  
L2 30 HUMAN Y4 RECEPTOR#

=> dup rem l2  
PROCESSING COMPLETED FOR L2  
L3 10 DUP REM L2 (20 DUPLICATES REMOVED)

=> d l3 ibib abs 1-10

L3 ANSWER 1 OF 10 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN  
ACCESSION NUMBER: 2002-712388 [77] WPIDS  
CROSS REFERENCE: 1996-277371 [28]; 1998-051901 [05]; 1999-590415 [50]  
DOC. NO. CPI: C2002-201986  
TITLE: Modifying feeding behavior of subject, useful in treating  
feeding disorders, involves administering to subject Y5  
receptor agonist or antagonist, to increase or decrease  
consumption of food by subject.  
DERWENT CLASS: B04 B05 D16 K08  
INVENTOR(S): BRANCHEK, T; GERALD, C P G; WALKER, M W; WEINSHANK, R L  
PATENT ASSIGNEE(S): (SYNA-N) SYNAPTIC PHARM CORP  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002103123	A1	20020801	(200277)*		102

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002103123	A1	CIP of	US 1994-349025 19941202
		Div ex	US 1995-566096 19951201
		Cont of	US 1998-200673 19981125
			US 2001-962646 20010924

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 2002103123	A1	US 5602024
		US 5968819
		US 6316203

PRIORITY APPLN. INFO: US 1995-566096 19951201; US 1994-349025  
19941202; US 1998-200673 19981125; US  
2001-962646 20010924

AN 2002-712388 [77] WPIDS  
CR 1996-277371 [28]; 1998-051901 [05]; 1999-590415 [50]  
AB US2002103123 A UPAB: 20021129

NOVELTY - Modifying (M1) feeding behavior of a subject, involves  
administering to the subject an amount of a compound (C) which is a Y5  
receptor agonist or antagonist effective to increase or decrease,  
respectively, the consumption of food by the subject so as to modify  
feeding behavior of the subject.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the  
following:

- (1) an isolated nucleic acid (I) encoding a Y5 receptor;
- (2) a purified Y5 receptor protein (II);
- (3) a vector (III) comprising (I);
- (4) a mammalian cell (IV) comprising (III);
- (5) an insect cell (V) comprising (III);
- (6) a membrane (VI) preparation isolated from (IV);
- (7) a nucleic acid probe (VII) comprising a nucleic acid of at least  
15 nucleotides capable of specifically hybridizing with a unique sequence  
included within the sequence of a nucleic acid encoding (I);

(8) an antisense oligonucleotide (VIII) having a sequence capable of specifically hybridizing to mRNA encoding (I) so as to prevent translation of the mRNA, or capable of binding to (I);

(9) an antibody (Ab1) capable of binding to (II);

(10) an antibody (Ab2) capable of competitively inhibiting the binding of Ab1 to (II);

(11) a pharmaceutical composition (PC1) comprising (VIII) capable of passing through a cell membrane effective to reduce expression of human Y5 receptor;

(12) a pharmaceutical composition (PC2) comprising Ab1 effective to block binding of a ligand to the Y5 receptor;

(13) a transgenic non-human mammal (IX) expressing DNA encoding (I), or comprising a homologous recombination knockout of the native Y5 receptor;

(14) a transgenic non-human mammal (X) whose genome comprises antisense DNA complementary to DNA encoding (I), so placed as to be transcribed into antisense mRNA which is complementary to and hybridizes with mRNA encoding Y5 receptor, thus reducing its translation;

(15) determining (M2) whether a ligand can specifically bind to a Y5 receptor;

(16) a ligand (L1) determined by M2;

(17) determining (M3) whether a ligand is a Y5 receptor agonist (A1);

(18) determining (M4) whether a ligand is a Y5 receptor antagonist (A2);

(19) a Y5 ligand (A1 or A2) determined by M3;

(20) a pharmaceutical composition (PC3) comprising A1 or A2 effective to increase or decrease the activity of a Y5 receptor;

(21) screening (M5) a number of chemical compounds not known to bind to or activate a Y5 receptor to identify the compound which specifically binds to activate a Y5 receptor;

(22) screening (M6) a number of chemical compounds not known to inhibit the activation of a Y5 receptor to identify the compound which inhibits activation of a Y5 receptor;

(23) a pharmaceutical composition (PC5) comprising a drug identified by M5 or M6, and a pharmaceutically acceptable carrier;

(24) identifying (M7) an agonist or antagonist capable of alleviating an abnormality;

(25) an agonist or antagonist identified by M7;

(26) a pharmaceutical composition (PC6) comprising the agonist or antagonist identified by the above method;

(27) preparing the purified Y5 receptor;

(28) a method (M8) of treating a feeding disorder in a subject comprising administering to the subject an amount of a non-peptidyl or peptidyl compound which is a Y5 receptor antagonist effective to inhibit the activity of the subject's Y5 receptor;

(29) a method (M9) of treating a feeding disorder in a subject comprising administering to the subject an amount of a non-peptidyl or peptidyl compound which is a Y5 receptor agonist effective to inhibit the activity of the subject's Y5 receptor;

(30) diagnosing (M10) a predisposition to a disorder associated with the activity of a specific human Y5 receptor allele;

(31) a method (M11) of detecting expression of Y5 receptor by detecting the presence of mRNA coding for the Y5 receptor;

(32) a method of determining the physiological effects of varying levels of activity of human Y5 receptors which comprises producing (IX) whose levels of human Y5 receptor activity are varied by use of an inducible promoter which regulates human Y5 receptor expression; and

(33) a method of determining the physiological effects of varying levels of activity of human Y5 receptors which comprises producing a panel of (IX) each expressing a different amount of human Y5 receptor.

ACTIVITY - Metabolic; Anorectic; Antidepressant; Tranquilizer; Antimigraine; Analgesic; Hypotensive; Cerebroprotective; Cardiant; Antidiarrheic; Hemostatic.

MECHANISM OF ACTION - Agonist or antagonist of Y5 receptor (claimed); vaccine.

Three hundred pmole of porcine Neuropeptide Y (NPY) in vehicle was administered by intracerebroventricular (i.c.v.) injection, along with intraperitoneal (i.p.) administration of compound vehicle (10% DMSO/water), and the food intake of NPY-stimulated animals was compared to food intake in animals treated with the vehicles. The 300 pmole injection of NPY was found to significantly induce food intake. Using the 300 pmole dose of NPY found to be effective to stimulate feeding, other animals were treated with Y5 receptor antagonistic compounds by i.p. administration, followed 30-60 min later by i.c.v. NPY administration, and measurement of subsequent food intake. NPY-induced food intake was significantly reduced in animals first treated with the antagonistic compounds. These experiments demonstrated that NPY-induced food intake was significantly

reduced by administration to animals of a compound which is a Y5-selective antagonist.

USE - M1 is useful for modifying feeding behavior of a subject e.g. vertebrate, mammal, human or canine. Y5 receptor agonist or antagonist compounds are useful for treating a feeding disorder (e.g. anorexia, obesity or bulimia) in a subject. The pharmaceutical compositions are useful for treating an abnormality alleviated by the inhibition or activation of Y5 receptor, in a subject. Ab1 is useful for detecting the presence of (I) on the surface of a cell (claimed).

The agonist of (I) is useful for treating an abnormality in a subject, where the abnormality includes anorexia, sexual/reproductive disorder, depression, anxiety, memory loss, migraine, pain, epileptic seizure, hypertension, cerebral hemorrhage, shock, congestive heart failure, sleeve disturbance, nasal congestion, and diarrhea. The antagonist of (I) is useful for treating obesity and bulimia.  
Dwg.0/22

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:401874 CAPLUS

DOCUMENT NUMBER: 133:39131

TITLE: Cloning and sequences of human and rat fb41a receptor cDNAs and their diagnostic and therapeutic uses

INVENTOR(S): Bard, Jonathan A.

PATENT ASSIGNEE(S): Synaptic Pharmaceutical Corporation, USA

SOURCE: PCT Int. Appl., 133 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034334	A1	20000615	WO 1999-US29268	19991210
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1147136	A1	20011024	EP 1999-966095	19991210
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2003516109	T2	20030513	JP 2000-586776	19991210
PRIORITY APPLN. INFO.:			US 1998-210279 A	19981210
			WO 1999-US29268 W	19991210

AB The human cDNA encoding fb41a receptor is isolated from human genomic placenta library by screening with oligonucleotide probes directed to the seven transmembrane regions of \*\*\*human\*\*\* \*\*\*Y4\*\*\*  
\*\*\*receptor\*\*\* under reduced stringency conditions. The closest amino acid identity of fb41a receptor to other GPCR (G-protein coupled receptors) members is less than 27%, so it probably belongs to the novel subfamily of the GPCR superfamily. The fb41a receptor mRNA is present at high levels in the human fetal brain and several regions of the human brains. The function of fb41a receptor is unknown and its endogenous ligands is likely to be a neurotransmitter. The fb41a receptors is well conserved and may play a functional role across phylogeny since fb41a-like sequences are also present in multiple species including monkey, rat, dog, cow, rabbit and yeast. The partial sequences encoding rat fb41a receptor is also provided. Vectors comprising isolated nucleic acid encoding a mammalian fb41a receptor, cells comprising such vectors, antibodies, nucleic acid probes useful for detecting nucleic acid encoding a mammalian LPA receptor, antisense oligonucleotides, and transgenic nonhuman animals are also provided. The invention also provides methods of expressing and purifying mammalian fb41a receptor, methods of treating an abnormality that is linked to the activity of the mammalian fb41a receptor, as well as methods of screening for compds. binding to mammalian fb41a receptors. The invention also provides methods of isolating a mammalian LPA receptor, methods of treating an abnormality that is linked to the activity of the mammalian LPA receptor, as well as methods of detg. binding of compds. to mammalian LPA receptors.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 10 MEDLINE on STN DUPLICATE 1  
 ACCESSION NUMBER: 200010720 MEDLINE  
 DOCUMENT NUMBER: 20107209 PubMed ID: 10640301  
 TITLE: Functional and molecular properties of the human recombinant Y4 receptor: resistance to agonist-promoted desensitization.  
 AUTHOR: Voisin T; Goumain M; Lorinet A M; Maoret J J; Laburthe M  
 CORPORATE SOURCE: Unite de Neuroendocrinologie et Biologie Cellulaire Digestives, Institut National de la Sante et de la Recherche Medicale U410, Faculte de Medecine Xavier Bichat, Paris, France.. tvoisin@bichat.inserm.fr  
 SOURCE: JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, (2000 Feb) 292 (2) 638-46.  
 Journal code: 0376362. ISSN: 0022-3565.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200002  
 ENTRY DATE: Entered STN: 20000309  
 Last Updated on STN: 20021218  
 Entered Medline: 20000222

AB After stable transfection of Chinese hamster ovary cells with the \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\*, clone 29 was isolated and studied for receptor properties. The following data were obtained: 1) one class of binding site was identified by analysis of (125)I-human pancreatic polypeptide (hPP) binding to cell membranes with a K(d) value of 0.26 nM and a B(max) value of 1.44 pmol/mg protein; 2) the K(i) values for inhibition of (125)I-hPP binding by hPP, human peptide YY (hPPY), human neuropeptide Y (hNPY), and analogs were hPP (0.7 nM) < rat PP (47 nM) < hPPY (94 nM) < h[Leu(31)-Pro(34)]NPY (124 nM) << hNPY = porcine NPY(13-36) = rat D-[Trp(32)]NPY (>1 microm); 3) cross-linking experiments using (125)I-hPP identified a single M(r) 60,000 glycosylated Y4 receptor; and 4) the natural peptides hPP, hPPY, and hNPY inhibited forskolin-stimulated CAMP production in clone 29 cells with EC(50) values of 0.56 nM, 218 nM, and >1 microm, respectively. The inhibitory effect of hPP was abolished when cells were incubated with pertussis toxin, indicating a pertussis toxin-sensitive G(i) protein-mediated event. 5) Exposure of cells to 10 nM hPP for 24 h resulted in the absence of modification of binding capacity (1.38 versus 1.44 pmol/mg protein in control cells) or affinity (0.31 versus 0.26 nM in control cells); there also was no modification in the potency and efficacy of hPP in inhibiting forskolin-stimulated CAMP. Immunofluorescence indicated that the Y4 receptor was not internalized within the cells after 24-h treatment with 10 nM hPP. These data support that Y4 receptors are resistant to agonist-promoted desensitization and internalization. Clone 29 cells provide a valuable tool to further characterize the pharmacological aspects of \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\*.

L3 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2000:572584 CAPLUS  
 DOCUMENT NUMBER: 133:291490  
 TITLE: Y4 receptor in different species: Functional expression and binding  
 AUTHOR(S): Lundell, Ingrid; Berglund, Magnus M.; Larhammar, Dan  
 CORPORATE SOURCE: USA  
 SOURCE: Methods in Molecular Biology (Totowa, New Jersey) (2000), 153(Neuropeptide Y Protocols), 45-51  
 CODEN: MMBIED; ISSN: 1064-3745  
 PUBLISHER: Humana Press Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The Y4-receptor subtype shows high species diversity compared with the Y1-, Y2-, and Y5-receptor subtypes. The rodent Y4 receptor differs considerably in sequence, pharmacol., and distribution from the \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\*. To characterize further the intriguing species differences of the Y4 receptor, we have also cloned the Y4 receptor from the guinea pig, which is evolutionarily nearly equidistant from both primates and rodents. To be able to compare the pharmacol. properties of the Y4 receptors from the three different species, we have carried out binding studies under the same lab. setup using [125I]hPP as radioligand, because this ligand has the highest affinity for the Y4 receptors. The coding regions of the receptor genes from human (h), rat (r), and guinea pig (gp) were generated by polymerase chain reaction (PCR) and cloned into the mammalian expression vector pTEJ-8. The receptors were stably expressed in Chinese hamster ovary (CHO) cells and assayed for [125I]hPP binding as well as for the ability

of various peptides and peptide analogs to displace radio and binding.  
REFERENCE COUNT: 9 HERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 10 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 2000:2603 BIOSIS  
DOCUMENT NUMBER: PREV200000002603  
TITLE: Processes for identifying compounds that bind to the  
\*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\*  
AUTHOR(S): Bard, Jonathan A. [Inventor, Reprint author]; Walker, Mary  
W. [Inventor]; Branchek, Theresa [Inventor]; Weinshank,  
Richard L. [Inventor]  
CORPORATE SOURCE: Wyckoff, NJ, USA  
ASSIGNEE: Synaptic Pharmaceutical Corporation  
PATENT INFORMATION: US 5958709 Sep. 28, 1999  
SOURCE: Official Gazette of the United States Patent and Trademark  
Office Patents, (Sep. 28, 1999) Vol. 1226, No. 4. print.  
CODEN: OGUPE7. ISSN: 0098-1133.  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
ENTRY DATE: Entered STN: 23 Dec 1999  
Last Updated on STN: 31 Dec 2001

L3 ANSWER 6 OF 10 MEDLINE on STN DUPLICATE 2  
ACCESSION NUMBER: 1999329815 MEDLINE  
DOCUMENT NUMBER: 99329815 PubMed ID: 10401572  
TITLE: NPY receptor subtype in the rabbit isolated ileum.  
AUTHOR: Feletou M; Nicolas J P; Rodriguez M; Beauverger P; Galizzi  
J P; Boutin J A; Duhault J  
CORPORATE SOURCE: Institut de Recherches Servier, Suresnes, France..  
feletou@servier.fr  
SOURCE: BRITISH JOURNAL OF PHARMACOLOGY, (1999 Jun) 127 (3)  
795-801.  
Journal code: 7502536. ISSN: 0007-1188.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199909  
ENTRY DATE: Entered STN: 19990913  
Last Updated on STN: 19990913  
Entered Medline: 19990901

AB 1. The purpose of this work was to verify the hypothesis that the rabbit  
ileum is a selective preparation for the NPY Y5 receptor by using new  
selective antagonists recently synthesized. Spontaneous contractions of  
the rabbit isolated ileum were recorded and binding experiments were  
performed in cells expressing the human NPY Y1, Y2, Y4 or Y5 receptor  
subtype. 2. NPY analogues produced a concentration-dependent transient  
inhibition of the spontaneous contractions of the rabbit ileum with the  
following order of potency hPP > rPP > PYY > or = [Leu31,-Pro34]-NPY > NPY  
>> NPY13-36. Pre-exposure to rPP, PYY, [Leu31,Pro34]-NPY or NPY (but not  
NPY13-36) inhibited the effect of subsequent administration of hPP  
suggesting cross-desensitization of the preparation. The apparent  
affinity of the various agonists studied was correlated to the affinity  
reported for the \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\* subtype  
(and to a lesser extent for the rat Y4 subtype) but not to the affinity  
for the Y5 receptor subtype. 3. BIBO 3304, a selective NPY Y1 receptor  
antagonist, and CGP 71683A, a selective NPY Y5 receptor antagonist, did  
not affect the response to hPP. JCF 109, another NPY Y5 receptor  
antagonist, produced an inhibition of the response to hPP but only at the  
highest dose tested (10 microm) which also, by itself, produced intrinsic  
inhibitory effects. 4. 1229U91, a non-selective ligand for Y1, Y2, Y4 and  
Y5 receptors with high affinity toward the Y1 and Y4 receptor subtypes,  
produced a concentration-dependent transient inhibition of the spontaneous  
contractions of the rabbit ileum and a dose-dependent inhibition of the  
response to hPP (apparent pKB: 7.2). 5. These results suggest that in the  
rabbit ileum, the NPY receptor involved in the inhibition of the  
spontaneous contractile activity is a NPY Y4 receptor subtype.

L3 ANSWER 7 OF 10 MEDLINE on STN DUPLICATE 3  
ACCESSION NUMBER: 1999017423 MEDLINE  
DOCUMENT NUMBER: 99017423 PubMed ID: 9802437  
TITLE: NPY-induced feeding involves the action of a Y1-like  
receptor in rodents.  
AUTHOR: Kanatani A; Ito J; Ishihara A; Iwaasa H; Fukuroda T; Fukami  
T; MacNeil D J; Van der Ploeg L H; Ihara M  
CORPORATE SOURCE: Tsukuba Research Institute, Banyu Pharmaceutical Co. Ltd.,

SOURCE: Okubo, Japan.. kantniak@banyu.co.jp  
 REGULATORY PEPTIDES, (1998 Sep 25) 75-76 40-45.  
 Journal code: 8100479. ISSN: 0167-0115.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199901  
 ENTRY DATE: Entered STN: 19990202  
 Last Updated on STN: 19990202  
 Entered Medline: 19990119

AB We have reported that the potent peptidic Y1 antagonist, 1229U91, significantly suppressed NPY-induced and spontaneous feeding [32,33]. However, information on the precise selectivity of 1229U91 for NPY receptors is lacking. The Y5 receptor has been considered a key receptor for feeding regulation. In the present study we showed that 1229U91 has high affinities for the human and rat Y1 receptors ( $K_i = 0.041$  nM and 0.16 nM, respectively) and also a high affinity for the \*\*\*human\*\*\*  
 \*\*\*Y4\*\*\* \*\*\*receptor\*\*\* ( $K_i = 0.33$  nM), whereas it shows moderate affinities for the human Y2, Y5 and rat Y5 receptors ( $K$  values of 20-170 nM). Moreover, 1229U91 potently inhibits NPY-induced  $[Ca^{2+}]_i$  increases in cells expressing human Y1 receptors. In contrast, 1229U91 is an agonist at other NPY receptors like the Y2, Y4 and Y5 receptors. Intracerebroventricular (i.c.v.)-injected 1229U91 (30 microg/head) significantly suppressed human NPY-induced feeding in SD rats, while 1229U91 only moderately inhibited bovine pancreatic polypeptide (bPP; an in vivo Y5 agonist)-induced feeding. These results indicate that the food intake evoked by NPY might be mediated by the Y1 receptor, rather than the Y5 receptor. Thus, the Y1 receptor or possibly a novel Y1-like receptor sensitive to 1229U91 may play a key role in the regulation of NPY-induced feeding.

L3 ANSWER 8 OF 10 MEDLINE on STN DUPLICATE 4  
 ACCESSION NUMBER: 1999017377 MEDLINE  
 DOCUMENT NUMBER: 99017377 PubMed ID: 9802391  
 TITLE: The cloned guinea pig pancreatic polypeptide receptor Y4 resembles more the human Y4 than does the rat Y4.  
 AUTHOR: Eriksson H; Berglund M M; Holmberg S K; Kahl U; Gehlert D R; Larhammar D  
 CORPORATE SOURCE: Department of Neuroscience, Uppsala University, Sweden.  
 SOURCE: REGULATORY PEPTIDES, (1998 Sep 25) 75-76 29-37.  
 Journal code: 8100479. ISSN: 0167-0115.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 OTHER SOURCE: GENBANK-AF072822  
 ENTRY MONTH: 199901  
 ENTRY DATE: Entered STN: 19990202  
 Last Updated on STN: 20000303  
 Entered Medline: 19990119

AB Pancreatic polypeptide (PP) is involved in gastrointestinal functions and forms, together with neuropeptide Y (NPY) and peptide YY (PYY), the PP-fold family of peptides. The PP-binding receptor subtype Y4 has so far been cloned in human, rat, and mouse, and displays extensive species differences regarding sequence, pharmacology, and distribution. To explore this variability further, we have cloned the Y4 receptor in the guinea pig, which is evolutionarily equally distantly related to both humans and rodents. The guinea pig Y4 receptor is 84% identical to the \*\*\*human\*\*\*  
 \*\*\*Y4\*\*\* \*\*\*receptor\*\*\*, but only 74-75% identical to the rat and mouse receptors. The two latter are 75-76% identical to human Y4. The guinea pig Y4 receptor bound  $^{125}I$ -hPP with a dissociation constant ( $K_d$ ) of  $29 \pm 3$  pM. The pharmacological profile of guinea pig Y4 has the following rank order of potencies: PP > NPY approximately = PYY approximately = LP-NPY approximately = LP-PYY > NPY2-36 >> [D-Trp32]NPY. Thus, the guinea pig receptor is more similar to the human Y4 than to the rat Y4 both in sequence and pharmacology. This agrees with the greater identity between guinea pig and human PP compared to rat PP. These comparisons suggest that the rodent PPs and Y4 receptors have an accelerated replacement rate.

L3 ANSWER 9 OF 10 MEDLINE on STN DUPLICATE 5  
 ACCESSION NUMBER: 97353941 MEDLINE  
 DOCUMENT NUMBER: 97353941 PubMed ID: 9210181  
 TITLE: A structure-activity analysis of the cloned rat and  
 \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptors\*\*\* for  
 pancreatic polypeptide.

AUTHOR: walker M W; Smith K E; Bard J; Vaysse P J; rald C; Daouti S; Weinsht R L; Branchek T A  
CORPORATE SOURCE: Synaptic Pharmaceutical Corporation, Paramus, NJ 07652, USA.  
SOURCE: PEPTIDES, (1997) 18 (4) 609-12.  
JOURNAL CODE: 8008690. ISSN: 0196-9781.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-U84245  
ENTRY MONTH: 199709  
ENTRY DATE: Entered STN: 19970922  
Last Updated on STN: 19970922  
Entered Medline: 19970911

AB We cloned and expressed the rat Y4 receptor for pancreatic polypeptide (PP). Structure-activity profiles derived from 125I-PP binding assays and [cAMP] radioimmunoassays reveal a selective receptor interaction with rat PP vs. neuropeptide Y (NPY) or peptide YY (PYY). Rat and \*\*\*human\*\*\* clones share 75% amino acid identity. Based on [cAMP] radioimmunoassay, the \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\* exhibits a less selective interaction with rat PP vs. NPY or PYY and a greater dependence on N-terminal PP residues, relative to rat Y4. Differences in sequence and structure-activity profiles suggest the rat be used with caution to model \*\*\*human\*\*\* \*\*\*Y4\*\*\* \*\*\*receptor\*\*\* function.

L3 ANSWER 10 OF 10 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 6  
ACCESSION NUMBER: 1995-246190 [32] WPIDS  
DOC. NO. CPI: C1995-112950  
TITLE: New nucleic acid encoding a Y4-Receptor, anti-sense mols. and ligands - useful for treating amnesia, feeding/sleeping disorders or epilepsy, etc..  
B04 D16 P14  
DERWENT CLASS:  
INVENTOR(S): BARD, J A; BRANCHEK, T; WALKER, M W; WEINSHANK, R L  
PATENT ASSIGNEE(S): (SYNA-N) SYNAPTIC PHARM CORP  
COUNTRY COUNT: 58  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9517906	A1	19950706	(199532)*	EN	154
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ					
W: AM AU BB BG BR BY CA CN CZ FI GE HU JP KG KP KR KZ LK LT LV MD MG					
MN NO NZ PL RO RU SD SI SK TJ TT UA US UZ VN					
AU 9515518	A	19950717	(199544)		
US 5516653	A	19960514	(199625)		34
EP 746332	A1	19961211	(199703)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
ES 2097717	T1	19970416	(199722)		
EP 746332	A4	19970226	(199728)		
JP 09511127	W	19971111	(199804)		148
AU 702438	B	19990218	(199919)		
US 5958709	A	19990928	(199947)		
US 5976814	A	19991102	(199953)		
EP 746332	B1	20000209	(200012)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
DE 69423007	E	20000316	(200021)		
ES 2097717	T3	20000616	(200036)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9517906	A1	WO 1994-US14436	19941228
AU 9515518	A	AU 1995-15518	19941228
US 5516653	A	US 1993-176412	19931228
EP 746332	A1	WO 1994-US14436	19941228
		EP 1995-907215	19941228
ES 2097717	T1	EP 1995-907215	19941228
EP 746332	A4	EP 1995-907215	
JP 09511127	W	WO 1994-US14436	19941228
		JP 1995-518082	19941228
AU 702438	B	AU 1995-15518	19941228
US 5958709	A Div ex	US 1993-176412	19931228
		US 1995-555268	19951108
US 5976814	A CIP of	US 1993-176412	19931228



EP 746332	B1	WO 1994-US14436	19941228
DE 69423007	E	US 1997-495695	19970113
ES 2097717	T3	WO 1994-US14436	19941228
		EP 1995-907215	19941228
		DE 1994-623007	19941228
		WO 1994-US14436	19941228
		EP 1995-907215	19941228
		EP 1995-907215	19941228

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9515518	A	Based on	WO 9517906
EP 746332	A1	Based on	WO 9517906
ES 2097717	T1	Based on	EP 746332
JP 09511127	W	Based on	WO 9517906
AU 702438	B	Previous Publ.	AU 9515518
		Based on	WO 9517906
US 5958709	A	Div ex	US 5516653
US 5976814	A	CIP of	US 5516653
		Based on	WO 9517906
EP 746332	B1	Based on	WO 9517906
DE 69423007	E	Based on	EP 746332
		Based on	WO 9517906
ES 2097717	T3	Based on	EP 746332

PRIORITY APPLN. INFO: US 1993-176412 19931228; US 1995-555268  
19951108; US 1997-495695 19970113

AN 1995-246190 [32] WPIDS  
AB WO 9517906 A UPAB: 19991122

An isolated nucleic acid mol. (I) encoding a Y4 receptor (Y4-R), is new.  
USE - The antisense oligonucleotide is used in compsns. to decrease activity of Y4-R, esp. in transgenic non-human mammals. (I) is used in determin. of ligands which bind to the Y4-R, the ligands being either antagonists or agonists. Also (I) permits screening of drugs which bind to the Y4-R. Expression of a Y4-R can be determined by contacting the probe to mRNA encoding Y4-R. The ligands, can be used to treat abnormalities, the antagonist for treating amnesia, feeding disorders, epilepsy, hypertension, sleeping disorders or pain. Physiological levels of varying Y4-R expression is determined by using transgenic non-human mammals and these can also be effective for determin. of whether antagonists alleviate associated disorders (claimed).

Dwg.0/9

ABEQ US 5516653 A UPAB: 19960625

A new isolated nucleic acid molecule encoding a \*\*\*human\*\*\* \*\*\*Y4\*\*\*  
\*\*\*receptor\*\*\*, wherein the Y4 receptor has the amino acid sequence

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